

## C L A I M S

What is claimed and desired to be secured by Letters Patent is as follows:

1. An interbody spacer device for implanting between a pair of adjacent vertebrae to maintain a selected spacing and mutual orientation therebetween and comprising:
  - (a) a conical portion defined at least partially by a first surface having a substantially conically varying shape from a diverged end to a converged end;
  - (b) a cylindrical portion defined at least partially by a second surface having a cylindrical shape; and
  - (c) said cylindrical portion being joined to said conical portion at said converged end of said conical portion.

2. A device as set forth in Claim 1 and including:
  - (a) at least partial thread members extending radially outward from said cylindrical portion and said conical portion, said thread members having crests defining an incomplete cylindrical shape.
3. A device as set forth in Claim 1 and including:
  - (a) upper and lower vertebra engaging sides, each vertebra engaging side being formed in part by said first surface and in part by said second surface; and
  - (b) opposite lateral sides, each lateral side being formed by a convex, generally cylindrical surface.
4. A device as set forth in Claim 1 and including:
  - (a) stabilizing structure secured to said device and engaged with the vertebrae in such a manner as to laterally stabilize a spatial relationship between the vertebrae to thereby prevent tendencies of the vertebrae to pivot about said device.

5. A device as set forth in Claim 1 wherein the vertebrae include mutually facing vertebral surfaces and each vertebral surface includes a central region and an outer edge region, and including:
- (a) stabilizing structure connected to said device and extending laterally from opposite sides of said device; and
  - (b) said stabilizing structure being sized and shaped to be adapted to engage edge regions of said vertebral surfaces to thereby stabilize a spatial relationship between the vertebrae.
6. A device as set forth in Claim 1 wherein each of the vertebrae includes an intervertebral surface having a central region and an edge region and including:
- (a) an end cap member secured to said device; said end cap member adapted to engage an edge region of an intervertebral surface of each of the vertebrae in such a manner as to resist lateral pivoting of said vertebrae about said device when said device is implanted as a sole spacer between the vertebrae and engaging a central region of each of the vertebrae.

7. A device as set forth in Claim 1 and including:
- (a) an end cap member secured to said device; said end cap member adapted to engage the vertebrae in such a manner as to resist lateral pivoting of the vertebrae about said device when said device is positioned in substantial alignment with a median plane of the vertebrae.
8. A device as set forth in Claim 1 wherein:
- (a) said device is configured to facilitate orientation of said cylindrical portion posteriorly of said conical portion upon implanting said device between the vertebrae to thereby urge the vertebrae to a desired angular relationship therebetween.

9. An interbody spacer device for implanting between a pair of adjacent vertebrae to maintain a selected spacing and mutual orientation therebetween and comprising:
- (a) a conical portion defined at least partially by a first surface having a substantially conically varying shape from a diverged end to a converged end;
  - (b) a cylindrical portion defined at least partially by a second surface having a cylindrical shape;
  - (c) said cylindrical portion being joined to said conical portion at said converged end of said conical portion; and
  - (d) at least partial thread members extending from said conical portion and said cylindrical portion, said thread members having crest that form an incomplete cylindrical shape.

10. A device as set forth in Claim 9 and including:
- (a) upper and lower vertebra engaging sides, each vertebra engaging side being formed in part by said first surface and in part by said second surface; and
  - (b) opposite lateral sides, each lateral side being formed by a convex, generally cylindrical surface.
11. A device as set forth in Claim 9 and including:
- (a) stabilizing structure operably secured to said device and adapted to engage the vertebrae in such a manner so as to laterally stabilize a spatial relationship between the vertebrae to thereby prevent tendencies of the vertebrae to pivot about said device.

12. A device as set forth in Claim 9 wherein the vertebrae include mutually facing vertebral surfaces and each vertebral surface includes a central region and an outer edge region, and including:
- (a) stabilizing structure operably connected to said device and extending laterally from opposite sides of said device; and
  - (b) said stabilizing structure being sized and shaped to be adapted to engage edge regions of the vertebral surfaces to thereby stabilize a spatial relationship between the vertebrae.
13. A device as set forth in Claim 9 wherein each of the vertebrae includes an intervertebral surface having a central region and an edge region and including:
- (a) an end cap member secured to said device; said end cap member adapted to engage an edge region of an intervertebral surface of each of the vertebrae in such a manner as to resist lateral pivoting of the vertebrae about said device when said device is implanted as a sole spacer between the vertebrae and engaging a central region of each of the vertebrae.

14. A device as set forth in Claim 9 and including:
- (a) an end cap member operably secured to said device, said end cap member adapted to engage the vertebrae in such a manner as to resist lateral pivoting of the vertebrae about said device when said device is positioned in substantial alignment with a median plane of the vertebrae.
15. A device as set forth in Claim 9 wherein:
- (a) said device is configured to facilitate orientation of said cylindrical portion posteriorly of said conical portion upon implanting said device between the vertebrae to thereby urge the vertebrae to a desired angular relationship therebetween.



16. In an interbody spacer device for implanting between a pair of adjacent vertebrae to maintain a selected spacing and mutual orientation therebetween, the improvement comprising:

- (a) said spacer device including a conical portion defined at least partially by a first surface having a substantially conically varying shape from a diverged end to a converged end thereof;
- (b) said spacer device including a cylindrical portion defined at least partially by a second surface having a cylindrical shape; and
- (c) said cylindrical portion being joined to said conical portion at said converged end of said conical portion.

17. A device as set forth in Claim 16 and including:

- (a) at least partial thread members extending radially outward from said cylindrical portion and said conical portion.

18. A device as set forth in Claim 16 and including:
- (a) upper and lower vertebra engaging sides; each vertebra engaging face being formed in part by said first surface and in part by said second surface; and
  - (b) opposite lateral sides, each lateral side being formed by a convex, generally cylindrical surface.
19. A device as set forth in Claim 16 and including:
- (a) stabilizing structure operably secured to said device and adapted to engage the vertebrae in such a manner so as to laterally stabilize a spatial relationship between the vertebrae to thereby prevent tendencies of the vertebrae to pivot about said device.

20. A device as set forth in Claim 16 wherein the vertebrae include mutually facing vertebral surfaces and each vertebral surface includes a central region and an outer edge region, and including:

- (a) stabilizing structure operably connected to said device and extending laterally from opposite sides of said device; and
- (b) said stabilizing structure being sized and shaped to be adapted to engage edge regions of the vertebral surfaces to thereby stabilize a spatial relationship between the vertebrae.

21. A device as set forth in Claim 16 wherein each of the vertebrae includes an intervertebral surface having a central region and an edge region and including:

- (a) an end cap member operably secured to said device; said end cap member engaging an edge region of an intervertebral surface of each of the vertebrae in such a manner as to resist lateral pivoting of the vertebrae about said device when said device is implanted as a sole spacer between the vertebrae and engaging a central region of each of the vertebrae.

22. A device as set forth in Claim 16 and including:

- (a) an end cap member secured to said device; said end cap member adapted to engage the vertebrae in such a manner as to resist lateral pivoting of the vertebrae about said device when said device is positioned in substantial alignment with a median plane of the vertebrae.

23. A device as set forth in Claim 16 wherein:

- (a) said device is configured to facilitate orientation of said cylindrical portion posteriorly of said conical portion upon implanting said device between the vertebrae to thereby urge the vertebrae to a desired angular relationship therebetween.

24. In an interbody spacer device for implanting between a pair of adjacent vertebrae to maintain a selected spacing and mutual orientation therebetween, the improvement comprising:

(a) said interbody spacer device having a face with a truncated substantially funnel shaped side profile.

25. The device according to Claim 24 wherein:

(a) said face has a radially outward extending thread therealong.

26. An interbody spacer device for implanting between a pair of adjacent vertebrae to maintain a selected spacing and mutual orientation therebetween and comprising:

(a) said spacer device having a thread on at least vertebrae engaging sides thereof; said thread having a root that wraps at least partially around said spacer device and defines an incomplete surface having an overall shape of a funnel section; said funnel including a conical portion and a cylindrical portion;

- (b) said conical portion having a greatest radius near an anterior end of said spacer device; and
- (c) said cylindrical portion joining with said conical portion and extending to a posterior end of said spacer device.

27. In an interbody spacer for operable placement between a pair of vertebrae; the improvement comprising:

- (a) said spacer having upper and lower faces; and
- (b) each of said faces having a funnel shape with each of said faces having a greatest radius near an anterior end of each face.

28. The spacer according to Claim 26 wherein:

- (a) a thread extends radially outward from each face.

29. The spacer according the Claim 27 wherein:

- (a) said thread has a crest that defines an incomplete cylindrical pattern from near an anterior to near a posterior end of said spacer.